AMIGA

WORKBENCH

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Registered by Australia Post - Publication No. VBG7930

Number 31 | Circulation:1200 | December 1988

A XMAS COMIDI

COMPUTER MIDI INTERFACES

Next AUG Meeting

Sunday, December 18th, 1988 at 2pm

(Doors open at 1pm, meeting starts at 2pm sharp)

AUG meetings are held at Victoria College Burwood Campus
Burwood Highway, Burwood Melways map 61 reference B5.

Amiga Users Group Inc, PO Box 48, Boronia, 3155, Victoria, Australia

Australia's Largest Independent Association of Amiga Owners
The *Amiga Users Group Inc* has no affiliation with Commodore
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AMIGA™ Users Group

Who Are We?

The Amiga Users Group is a not-for-profit association of people interested in the Amiga computer and related topics. With over 1000 members, we are the largest independent association of Amiga users in Australia.

Club Meetings

Club meetings are held at 2pm on the third Sunday of each month at Victoria College, Burwood Highway, Burwood. Details on how to get there are on the back cover of this newsletter. The dates of upcoming meetings are:

Sunday, December 18th at 2pm

Note: No January Meeting

Production Credits

This month's newsletter was edited by Con Kolivas. Equipment and software used was: Amiga 500 with 1Mbyte, Excellence!, PIXmate and Impact L800 laser printer.

Copyright and Reprint Privileges

Contributions

Articles, papers, letters, drawings and cartoons are actively sought for publication in Amiga Workbench. Please submit your contributions on disk, since that means they don't have to be re-typed! All disks will be returned! Please save your article in **text-only** format (If it can be loaded by ED, it is text-only). Absolute deadline for articles is 16 days before the meeting date. Contributions can be sent to: The Editor, AUG, PO Box 48, Boronia, 3155.

Membership and Subscriptions

Membership of the Amiga Users Group is available for an annual fee of $25. To become a member of AUG, fill in the membership form in this issue (or a photocopy of it), and send it with a cheque for $25 to:

Amiga Users Group, PO Box 48, Boronia, 3155

Public Domain Software

Disks from our public domain library are available on quality 3.5" disks for $8 each including postage on AUG supplied disks, or $2 each on your own disks. The group currently holds over 200 volumes, mostly sourced from the USA, with more on the way each month. Details of latest releases are printed in this newsletter, and a catalog disk is available.

Member's Discounts

The **Amiga Users Group** negotiates discounts for its members on hardware, software and books.

Currently, **Technical Books** in Swanston Street in the city offers **AUG** members a 10% discount on computer related books, as does **McGills** in Elizabeth Street. Just show your membership card. Although we have no formal arrangements with other companies yet, most seem willing to offer a discount to AUG members. It always pays to ask!

Back Issues of Newsletter

All back issues of Amiga Workbench are now available, for $2 each including postage. Note that there may be delays while issues are reprinted. Back Issues are also available at meetings.

AmigaLink - Our Bulletin Board System

The Amiga Users Group operates a bulletin board system devoted to the Amiga, using the Opus message and conferencing software. AmigaLink is available 24 hours a day on (03) 792 3918, and can be accessed at V21 (300bps), V22 (1200bps), V23 (1200/75bps) or V22bis (2400bps) using 8 data bits, 1 stop bit and no parity.

AmigaLink is part of a world-wide network of bulletin boards, and we participate in national and international Amiga conferences. AmigaLink has selected Public Domain software available for downloading, and encourages the uploading of useful public domain programs from its users. AmigaLink is OzNet node number 8:830/324.

Newsletter Advertising

The Amiga Users Group accepts commercial advertising in Amiga Workbench subject to the availability of space at these rates:

Quarter page	$20
Half page	$40
Full page	$70
Double page spread	$120

These rates are for full-size camera-ready copy **only**. We have no photographic or typesetting facilities. Absolute deadline for copy is 16 days before the meeting date. Send the copy and your cheque to: The Editor, AUG, PO Box 48, Boronia, 3155, Victoria.

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AUG MAGAZINE AND BOOK LIBRARY
by Ross Johnson

Greetings! I am the new magazine and book librarian for the club library. I am very pleased to see that so many members are taking advantage of this excellent resource. Although there are no strict borrowing periods set, it is desirable if the items are returned at the following meeting. There are three ways items may be returned, at the club meetings, posted to the AUG address on the magazine or delivered to the Technical Book and Magazine Co. in Swanston Street, City (Comp. Dept.)

The following people have items that are very overdue. Would they please return them by one of the above methods. If there is a problem, please contact me on 824-7026.

ABOHAIDAR	,R.	2 MM
BENGTSSON	,K.	1 M
BURTON	,J.	1 M
CHENG	,A.	4 MMMM
CORET	,G.	1 M
CRUZ	,A.	2 MN
DEUTSCH	,L.	3 MNB
GARIVALDIS	,I.	1 B
GOLDBERG	,A.	2 NB
GREEN	,J.	1 B
GRINTER	,R.	2 MM
LOONG	,C.T.	2 MM
MARINELLI	,N.	1 M
MILBOURNE	,M.	1 B
NGUYEN	,H.T.	1 M
PAPA	,F.	2 MN
POULTER	,M.	1 B
POWELL	,S.	1 B
SMITH	,R.	1 B
THORPE	,R.	1 M
VALKOVIC	,P.	1 M
WILSON	,M.	4 MMMB
WORNER	,E.	2 MN

The number indicates the number of items in question, and the letters indicate what type of item(s) it is. (M)agazine, (N)ewsletter or (B)ook. Thankyou.

Digitizing on the Amiga
by Rex Shephard

I have written the following to endevour to give those who know nothing of video digitizing on the Amiga a short insight into what it is all about, and then I have gone on to explain some of the associated problems and how I improvised. Video digitizing is known to many of us and the process used with the Amiga and is second nature to some users, however as the user group expands some newer members may not be familiar with the term "digitizing". In brief digitizing is the capturing of an image via either a video camera or video cassette recorder and transferring that image to the memory of the Amiga. The image is shown on the Amiga monitor whilst the data is in the Amiga memory and can be "saved" to disk or "printer", saving the image to disk as mentioned is done in the standard IFF format which simply means that at a latter date the saved image IFF file can be loaded into your favourite paint and drawing program for further manipulation.

That may sound all very simple and so it is, HOWEVER to gain results that are acceptable further explanations are required. First I should give a little more information about the actual digitizing hardware and software, NEWTEK an American company were the first to design and build a digitizer which they named "DigiView" and this was released with the first Amiga 1000 and was the principal unit used to give us all those early quite brilliant graphic slideshows we must have all seen at one stage. The hardware is known as an analog to digital converter which as the name implies converts the signal from the video camera or video cassette recorder known as "VCR" hereafter, to a signal that the Amiga can understand and input via the centronics parallel port. DigiView software is a very sophisticated program and can be used after the image is captured to memory to manipulate the image data. The software can add or reduce brightness, contrast, color saturation and red,green and blue content individually plus alter the sharpness, color palette and even the number of colors required by the user be it from 2 to 4096+ very powerful software indeed.

The third item that is supplied with the NEWTEK DigiView is a color wheel, which consists of four segments of perspex, clear, red, green and blue. Placing this color wheel in front of the video camera lens and scanning the image three times you wish to capture, RED GREEN BLUE will produce a brilliant color reproduction of the original image. I am only going to mention the NEWTEK DigiView in this article as it is the only unit I have personally used although nowadays other digitizing products are available.

NEWTEK have an update policy with their software and since I purchased my DigiView in November 1987 the software has undergone two updates, plus a full PAL version with overscan. I feel we should be given the option to use PAL in all software [Ed's note—would that it were so!] and especially the graphics oriented software as used in video production work.

I hope that the above brief outline of what video digitizing is about did help some users to gain a better understanding of that topic, now I will go into what you should have to get into digitizing on the Amiga. First an Amiga 500 1000 or 2000 is required and there are two different centronics port configurations so, select the

correct digitizer to suit your particular model, very important. You are advised by NEWTEK to have at least 1 MEG of memory to run DigiView however if you want to use the higher resolutions in full color and take advantage of PAL and overscan a full 2 MEG will be required, I use 1.5 MEG and get by quite well. To save memory black and white digitizing can be carried out and later color manipulation can be done with one of the many paint drawing programs, another tip is to digitize in low resolution to save even more memory and then use a program like BUTCHER to convert that image data to a higher resolution. The next item required is of course a video digitizer be it NEWTEK's version or whatever, be warned, some of the other digitizers do however NOT come with software and the color wheel. The next items are optional, a video camera be it color or monochrome can be required or a VCR can be used, many owners of DigiView did not realize that digitizing could be done from their home VCR, however once again a big trap exists. Should you use a VCR for your digitizing it must be the newer three or four head machines, the older type had only two video heads and when you freeze frame the video you would be familiar with the very objectionable noise bars across the screen, and of course these are included in your digitizing and therefore produce an image that is not acceptable. I have used a three head machine for digitizing and was quite impressed with the result, the one major fault is that the digitized image from the VCR is only monochrome, however there is a solution. A piece of hardware has been designed and built to produce color images when taking a signal from your VCR to the Amiga, but at this date I have not seen it work or read any reviews of the "color splitter" as it is named.

When you record on your VCR a color image from the television set and digitize that imgae a lot of detail will be lost from the color image to the monochrome image that DigiView is capable of producing from a VCR. I have found a better way (for me) to capture this image, I set my monochrome camera up to film the television screen, which seems to work very well, and save that image or images to my VCR which can then be sent to the NewTek digitizer and a very good reproduction can be made. I use a Mitsubishi E20 VCR with three heads which gives a near perfect freeze frame, and very good results. The other option is the color video camera or the monochrome version, the latter is suggested by NEWTEK as the better to use for digitizing as it will enable a far better resolution to be captured by their hardware. If you now wish to purchase a monochrome video camera it must have what the technical people call a 2-1 interlace and this will allow the camera to provide the correct signal for the DigiView hardware. A 2-1 interlace is usually present with modern cameras and if buying an older model it is quite likely to have an internal switching to give you 2-1 interlace but be warned and try before you buy.

The list goes on; next to get some results that you can display to your friends or use perhaps commercially you will need some form of lighting to assist DigiView to gain the best results when capturing your image. NEWTEK state in the owners manual that "good" lighting is essential but they do not stipulate just what constitutes good lighting. I spent many dollars and hours of experimentation to find out just what was good lighting and a few phone calls around Australia to other owners was the best source. We are only dealing with monochrome video here with DigiView, even though we use the color wheel to achieve a full color image with up to 4096 shades, so the lighting required is similar to the old B&W television days, I was told by one expert.

According to a letter I received from NEWTEK this week they claim DigiView was designed to capture flat images only ie. postcards, books, posters and the like and if this is where your digitizing will end then I can recommend the use of some simple cheap lighting.

DigiView will work OK without any additional lighting if you have a good natural light source and know how to take advantage of it, but us computer users tend to work evenings on the computer and artificial lighting is of course required. I began with two 40 watt soft white lights of the type you use in the home, I then opted to four of these and soon after went for four of the same type only in 100 watt. The 40 watt was just a bit weak for digitizing images that were mainly of darker content, while the 100 watt was sometimes too bright and washed the image out, naturally different subjects require different amounts of lighting. The next move was to use the 100 watt lighting four globes still and pass them all through a dimmer to have that fine control for all image producing, and that worked fine.

Another very cheap alternative for lighting is to use two standard neon 20 watt desk lamps preferably with the flexible stems. I still use this type of lighting for a quick digitizing method as it's easy and quick to set up for say a fast demo. If you intend to go further than just the postcard type of digitizing or pictures from a book you are going to have to increase your lighting capacity. I have found that digitizing 3D objects requires much more light as it is essential to rid the image of as many of the shadows produced by 3D objects as possible. If and when you move onto digitizing live objects like yourself, diffused lighting will be the best for your comfort and to get professional results it could be necessary to move into studio lights. Once again I improvised with getting three 500 watt photo flood bulbs and bouncing their light off polystyrene and onto the subject, white walls can be used also to advantage, lighting stands can be made by the handy man and are essential for housing such powerful and hot lights.

The video camera will need some method of holding it steady to focus on the subject to be digitized and for postcard or book usage a copy stand will be required, these are simple to make if you are handy with a welder, if not other methods could be employed. I did see quite a sturdy and easy to build unit made from an old photo enlarger which already had the mechanics for the raising and lowering of the arm which mounted the video camera. If you do not wish to use a copy stand then a solid well made tripod can be used with quite good results, but floor movement must be well monitored and lighting can be a little more difficult to get onto the subject. A lead from the video camera or VCR to the DigiView input is required as this lead is not supplied as standard equipment with either the camera or DigiView.

What else do you need to get running? Well nothing really but as with cameras and photography hobbies you can keep adding, like a separate monitor can be handy to view the object while it is actually being digitized by the Amiga. You can buy more and varied lenses for your video camera, like telephoto zoom and wide angle lens and the list could go on and on. I prefer to keep playing with lighting as I personally feel this is the area where results are determined, but even some lighting is out of the question for me. A good brand video lighting unit with a 1000 watt fan cooled bulb would be a nice piece of equipment to test out but price is against that type of lighting as you would be spending more than the cost of the NEWTEK digitizer unit on just one light. A CCD video camera (the latest) would be the ultimate for capturing your images also, as this type of system does not pick up as much interference as a tube type camera and therefore give a superior digitized image (personal opinion) would be great to see the difference.

Finally select carefully your images to digitize, do not try and capture a picture with a very full and complicated background, DigiView is brilliant and at times handles over two million shades of color whilst working but it does not like having to be over-taxed with unnecessary backgrounds. Sharp images with heaps of contrast are definitely the best to attempt digitizing and use the same picture over and over until you get the desired results, keep trying and you will get better for sure. To end off I must mention that I have attempted some "LIVE" digitizing that is I have digitized my family which is the most difficult (I find) of all digitizing. The subject must be very well behaved and not move for the duration of the capturing, also lighting is very critical as shadows are not liked by DigiView and if these exist the image is very poor.

With the addition of my new VCR I now have managed to get a few good images by recording with the monochrome camera on my VCR my subjects and they can be moving or pose whatever and then re-play and freeze frame the exact image I want to digitize. This works well and is heaps more comfortable for the subjects also as they do not have the job of sitting dead still while I go through the process. I have never owned a camera of any form in my entire life so this was a real challenge to me and I was really behind the eight ball with photography talk when I asked for HELP and I would like to see any users who have experience with cameras and even better DigiView follow on from this article of mine with some tips and technical info to help all users of this very exciting and brilliant piece of hardware/software. Have a go fellows.

MY FAVOURITE FILLETS OF FISH
and
AMY FINDS A MATE
and
Other claret-clouded comments.
by Mark Kelly

WARNING: This article is intended for CLI-literate folk. For those who think s/startup-sequence is a new Swedish rock group, it might be a good time to read a few CLI-primer articles.

Changing favourite utilities is a little like parting with old friends. My s/startup-sequence wouldn't dream of finishing before it had started up VD0:, BLITZFONTS, CONMAN, POPCLI and HELIOSMOUSE. I have been loyal to POPCLI and HELIOSMOUSE ever since I discovered them on my much-loved AUG public domain disks. Recently, however, I became unfaithful and had what was meant to be a brief affair with a program called MACH which lives on Fish disk 130. [Ed's note-I have had a long standing relationship with this program.]

MACH is a clever little beast. It offers screen blanking and automatic CLI windows like POPCLI. Like HELIOSMOUSE it adds a clever mouse that activates any window over which the mouse pointer passes: no more clicking to change from one task's window to another! It also brings any clicked-on window to the front of the screen: so as long as any part of a window is visible it will immediately take centre stage. It also has nice features such as screen shuffling and it has a bigger brother that adds a clock and memory meter to the title bar. It's housetrained too: it allows you to disable features easily with control-Amiga strokes so it behaves itself when working with other software. For example, Wordperfect hates the "automatic window activation" feature when several windows are displayed and AMIGABASIC is awkward to use when the click-to-front option is on. I can just hit Control-Amiga-F3 to turn off the auto-mouse. Similar keys enable/disable Mach itself, screen blanking, clicking windows to the front and screen shuffling.

When I read the documentation I thought, "Whacko!" and merrily installed it on my main WorkBench disk. The only problem was that launching MACH from the startup-sequence didn't release the startup-sequence window when the ENDCLI executed at the end. RUNning MACH from a keyboard command worked fine and it readily returned to the prompt but it wouldn't give up control of the window when run from the startup-sequence. This is where another AUG disk, ARP, came to the rescue. [ed's note-Amigan disk #16]

ARP, the AmigaDOS Replacement Project, replaces the old AmigaDOS commands with much smaller, more powerful and more consistent versions and it adds new commands. If you spend much time in CLI you must have ARP. Workbench 1.3, soon to be released by Commodore, features some rewritten DOS commands following ARP's lead. Soon after receiving the ARP disk, my WorkBench disk was bristling with new power and fewer blocks. The particular ARP command that proved so useful was ARUN which, among other things, allows you to launch a process and still release its CLI window. MACH, when RUN, wouldn't let go its window: until ARUN came along and beat some sense into it. ARP certainly does make life much easier. The much-expanded wildcarding ability is a dream (no longer do we have to cringe as MS-DOS users casually claim that "Of COURSE my DOS can do THAT!"). Once I tested (and trusted) ARP, I scrapped all the old AmigaDOS commands and rely utterly on the ARP replacements. I've had no regrets. ARP is WELL worth investigating.

By way of a postscript, after all the carry-on getting MACH to work, I have since dumped it in favour of Dmouse which is much the same but slightly better behaved. For example rather than having to completely disable MACH's click-to-front feature when using AMIGABASIC, Dmouse lets you specify TWO clicks to bring the window to the front. Another nice Dmouse feature is click-window-back by holding down the left mouse button and clicking the right mouse button. It's the same as clicking the "Back gadget" at the top of the window but with Dmouse you can click anywhere in the window to do the job. When you do the same on a screen backdrop, it shuffles screens rather than windows! A Very Neat Hack! [ed's note-MACH modifies Amiga-M to shuffle screens rather than bring Workbench to front and back again] The only problem is that a newcli popped up with Dmouse's "POPCLI" feature does not adopt the parent-task's PATH or CD settings. You have to reset the PATH in the new CLI window.

FIREPOWER - Rambo in Armour

As a game, I'd rather not say too much. One ventures around in a silicon tank killing and being killed. Sociologists would question the feature that lets you run over fleeing enemy soldiers and be rewarded with extra points and a gruesome digitised "Squish". Don't let the kiddies near FIREPOWER, both for their and your joystick's sake.

The more interesting point to serious-minded Amigaphiles is how TIMESAVER, the neat clock-calendar-macro gadget, cooperates with auto-boot games like FIREPOWER. TIMESAVER, reviewed by a fellow AUG reader in these pages not so long ago, is a wonderfully clever beast. It does the boring old "What's the time, Mr Wolf?" game with your Amiga but it also offers thousands of bytes worth of battery-backed macros, some pre-defined

but most of the space is devoted to your own favourite keystroke combinations. You can define any macro you like and invoke it at anytime (even when running things like WordPerfect as I am now. Want an instant "s/startup-sequence" typed out? Voila! There it is! I just hit "Help+S". The macros can be disabled at any time if they conflict with any other software's magic key combinations.

What is both clever and potentially troublesome is the way TIMESAVER sets the system's clock. It does it in a most interesting way. When it notices the machine powering up or resetting, it leaps in, grabs control, sends the time and date to the Amiga and then sends an "Execute s/startup-sequence" command so the Amiga can get on with booting as usual. Another neat hack! At least it was neat until I bought FIREPOWER and fired it up. Nothing happened! Usual routine: swear; reboot; swear again; curse viruses, Amigas, life, the Universe and everything; break out a consoling bottle of claret. The last step, as always, was to sit and think it out. My thoughts eventually turned to my recently-installed TIMESAVER. "What would it be doing when Firepower boots?" I wondered. It dawned on me that it would be sending lots of strange time-date-execute s/startup-sequence information to FirePower instead of the usual Amiga environment! Firepower would be going troppo trying to work it out! Sure enough, that was the problem. It now seems the price I pay for TIMESAVER is having to disable it (it's easy enough: just a couple of keystrokes to disable and enable it) before using autobooting software.

Amiga to Amstrad and back again
or
AMY FINDS A MATE

I admit it. You can tar and feather me and expel me from AUG if you like but I finally gave in and bought an IBM compatible to keep Amy company. My job will soon involve word-processing on the run and I had to face the fact that, short of buying a forklift, I would not be able to carry megalithic Amy around the state to work for me. Of course, the only viable choices were IBM-compatible portables, and the pick of the bunch was the Amstrad PPC portable.

Why IBM compatible? How many offices you know have Amigas on their desks? How many publishers would say, "Sure! Send the MS on an Amiga disk!" Let's face it, brethren. We are the elite but we do not rule the computing world. IBM does, so sometimes we have to play by their rules.

Why Amstrad? It's the cheapest and it does the job. That's all.

With a new toy to play with, I immediately set out to clothe my new baby. Soon it was wearing WordPerfect (it's nice to turn from the Amiga to the Amstrad and use the same keystrokes for everything!), Turbo C (a delight! It puts my threadbare Amiga Lattice C compiler to shame) and Microsoft QuickBasic (a compiled Basic that also works just like an interpreter). It also makes the Amiga version of BASIC hang its head in miserable despondency. I have long scoffed at the MS-DOS world but I must admit they DO have a pretty good life. MS-DOS itself (the Amstrad PPC comes with version 3.3) is quite a powerful beast and have you compared the prices of equivalent IBM/Amiga software lately? It's frightening what we Amigos must pay for (I hate to say it) second-rate software.

SIDETRACK(HELP!!!!)

While I'm on the subject of MS-DOS, I'd love to write a C command to emulate the MS-DOS batch command 'FOR ... DO ...' but I need a way to execute AmigaDOS commands from within a C program. Kernighan & Ritchie's White Bible says there should be a System() function in C (p.157) but my Lattice compiler (version 3.03) won't accept it. By performing an ASCII dump, I found there IS an Execute() function in amiga.lib (I was tipped off by the &Execute() function defined in the FD files on the EXTRAS disk and shown in AmigaWorld Sept/Oct 1986, p.52-53.) I checked in Mortimore's Programmer's Handbooks (vol.1&2) but it isn't described there. Does it really exist? IS there a way to call DOS commands from within Lattice C programs? Turbo C makes it a trivial task with its System() and related commands! It's so infuriating that the computer of the century and its expensive compiler can't match a clone and a $115 compiler!

I tried using Execute() as follows...

```
#include <stdio.h>
main
(
extern Execute();
Execute("dir",0,0);
)
```

It compiled and linked OK but did nothing when executed. What's the secret? END SIDETRACK

The story so far: I have a desk-bound Amiga, expanded to the gills, bulging with megabytes of manuscripts. I have a baby Amstrad starving for input. I would like to put my manuscripts into the Amstrad so I can carry them around and feed them into any other interested party's IBM. That, after all was the whole point of buying the Amstrad.

ALTERNATIVES:

1. Type everything in again. (Choke, gasp, collapse...)

2. Find an Amiga 2000 and pass the documents from the Amiga side to the IBM side. Good idea, but no 2000s live near me.
The thought of retyping megabytes made me an instant technophile and my mind immediately turned to the easiest way of accomplishing digital data transfer without demolishing my delicate digits. This brought up Alternative 3.

3. Find two modems, put Amy at one end of a telephone line and the Amstrad at the other, send a few megabytes down the line at 300 baud... It didn't sound promising.

Brainwave! 4. Make a null modem!

A what? I had always thought a null modem was a special (i.e. expensive) form of modem to transfer data between adjacent computers. After extensive research in my magazine archives and wine cellar I discovered a null modem is nothing more than a rewired RS-232 (serial) cable. It sounded easy and cheap so I tried it.

I'll spare you the gory technological traumas of soldering and playing with communications protocols. I'll give you the basic findings that worked. Several 'authoritative' sources suggested wirings that were completely wrong: the best source was the Amstrad's manual!

THE HARDWARE...

I went to the only local computer shop and bought 2 metres of 6-core cable, a male DB25 plug and a female DB25 plug. I trotted home, braced myself with claret and brandished the soldering iron. The plugs ended up wired like this...

	AMIGA male plug		AMSTRAD female plug	
TXD	2	———————	3	RXD
CTS	5	———————	20	DTR
RXD	3	———————	2	TXD
DTR	20	———————	5	CTS
GND	7	———————	7	GND
	I-4	RTS	4-I	
joined	I-6	DSR	6-I	joined
	I-8	DCD	8-I	

where TXD=transmit, RXD=receive, CTS=Clear to send, DTR=Data terminal ready, GND=signal ground. Pins 4 (RTS, Request to send output), 6 (DSR, Data Set Ready input) and 8 (DCD, Data carrier detect) of each plug should be wired together: solder short lengths of wire to each of the pins and twist, solder and tape the other ends together in each plug. Whatever you do, avoid pins 14,21 and 23 on the Amiga plug. They carry 5V or 12V of power which will probably fry your peripherals and if there's anything worse than a visit by the Guru, it's fried peripherals.

THE SOFTWARE Attempt 1.
I plugged in the cable and tried a cheeky shortcut first. I used the MS-DOS MODE command to set the Amstrad's serial parameters and set the Amiga's preferences to match the Amstrad. Then I tried...

COPY filename SER: (on the Amiga) and
COPY AUX filename (on the Amstrad)

It didn't work, but as they say, it was worth a shot.

Attempt 2.
I loaded COMM (available via Fred Fish) into Amy and QUAD, an integrated package that includes communications that was bundled with the portable, into the Amstrad.

	Amiga	Amstrad
Baud	1200	1200
Parity	None	None
Data bits	8	8
Stop bits	1	1
Duplex	Full	Full
	XON/XOFF off	NO PROTOCOL
		DEVICE="Network"

I selected CAPTURE on one machine and SEND ASCII TEXT (or SUBMIT) on the other. It worked! Text flowed beautifully between the machines. After transmitting, select CAPTURE again on the receiving machine to save the text to disk.

Warning: WordPerfect's supposed "text" files AREN'T pure text, they include Form Feeds (ASCII 12) and Vertical Tabs (ASCII 11) which Ed objects to [Ed's note-try Excellence!]. They won't be transmitted properly either. They must be converted to ASCII 10. I use this clumsy little hack to process WP files saved as "Text only".

```
/*  STRIP : strips binary from WP  "text"  file.
By Mark Kelly.
    Format=  STRIP  input  output
*/ # include "lattice/stdio.h"
# define FORMFEED '\x0C'
# define VERTTAB  '\x0B'
# define CR       '\x0A'
FILE *infile,*outfile;

main(argc,argv)
int argc;
char *argv[];
{
   char c;
   if ((infile = fopen(argv[1],"r")) == 0)   {
    puts("Can't find input.\n");   exit(1);   }
   if ((outfile = fopen(argv[2],"w")) == 0)   {
     puts("Can't open output.\n");  exit(1);   }

   while (1)   (
      c = getc(infile);
      if (feof(infile)) exit(0);
      if (c == FORMFEED || c  ==  VERTTAB)   c  =
CR;
      putc(c,outfile);
   )
)
```


The problem with the cable is that it is MOST basic. It doesn't seem to provide proper handshaking. For example, when the Amiga is transmitting from a file in VD0: to the Amstrad who's trying to save the incoming text to disk (which takes much more time), information is lost if the baud rate is set over 1200 or 2400 baud. The Amstrad simply can't keep up with the Amiga's transmission.

For entertainment more than anything, I wrote a communications program in BASIC (YES! BASIC!!) for quick (19200 baud!) file transfer. It has primitive but effective handshaking. The program's other advantage is that I don't have to muck around with setting up COMM and QUAD just to send a file. Since I'm using Microsoft BASIC on each machine, the same program can be used on each machine. That's nice. This is what it looks like.

```
DEFINT a-z
CLS:PRINT "Text MODEM":PRINT
eofile$="MarkKelly" 'a unique End-of-
transmission marker
buffer=4096 'use generous buffers to reduce disk
activity
nb!=0 'byte counter
serial=1 'serial channel's ID.
dsk=2 'disk file's ID

'serial protocol: 19200 baud!, no parity, 8 data
bits, 1 stop bit
filespec$="com1:19200,N,8,1"
OPEN filespec$ AS #serial LEN=buffer 'open
serial device for i/o

PRINT "Send or Receive? " ;
 a$=UCASE$(INPUT$(1)):PRINT a$
 IF a$="S" THEN GOSUB send ELSE IF a$="R" THEN
GOSUB receive
END

send:
INPUT"File to send ";ofile$
OPEN ofile$ FOR INPUT AS dsk LEN=buffer
INPUT "Hit return when receiving machine is
ready",a$

WHILE NOT EOF(dsk)
  LINE INPUT #dsk,a$   'get line of text from
disk
  PRINT #serial,a$      'send it to other
machine
  nb!=nb!+LEN(a$)       'count bytes
  a$=INPUT$(1,serial) 'wait for 1-byte "I'm
ready" signal from receiver
WEND
PRINT #serial,eofile$   'tell other machine
we've finished
PRINT "File sent:"nb!"bytes."
END

receive:
INPUT"File to save input in";ifile$
OPEN ifile$ FOR OUTPUT AS dsk LEN=buffer
PRINT "Ready to receive"
LINE INPUT #serial,a$ 'get first line of text
from serial

WHILE a$<>eofile$ 'loop until magic EOF received
  PRINT #dsk,a$ 'save received line to disk
  PRINT a$            'and show it onscreen
  nb!=nb!+LEN(a$)         'count bytes received
  PRINT #serial,"Y"; 'send 1-byte "I'm ready"
signal
  LINE INPUT #serial,a$ 'get next line from
other machine
WEND
PRINT "File received:"nb!"bytes"
END
```

Conclusions.

The cable cost me $9.60 and one hour's claret-clouded fun with a soldering iron. I have now transferred many megabytes of manuscripts from Amy to the Amstrad. The only problem now is coming up with a name for the Amstrad. I'd call it Amy if the name wasn't reserved. How does "Hamster" sound?

If you lack an Amiga 2000 but are thinking of becoming biDOSal, you might consider trying the null-modem method. Of course none of this would've been necessary if there had been a PORTABLE IBM-COMPATIBLE Amiga! Hint, hint, Commodore-Amiga! Happy hacking, Amigaphiles!

==========

SCRAMBLES
by Con Kolivas.

This is the first in what is going to be a continuous series of articles by the [new] editor (that's me) on lots of different goodies [SCRAMBLES = aSsortments of Con's RAMBLES] relevant to me and hopefully relevant to some of you. The less articles you submit, the longer the scrambles each month. If you are lucky you may not even get any scrambles some months.

This month, PIXmate

PIXmate can be considered perhaps the third generation of a new style of program unique to the Amiga; image processors (The first two generations would be Butcher v1.0 and v2.0). The name image processor is exactly what this program is. There are no drawing tools whatsoever in PIXmate.

What can it do? Well if you have used Butcher then you probably already know the main functions. It has two screens which you can flip between and work on individually, move or copy to with the added bonus of special effects filters. You can perform binary operations with logical, pixel and matrix operations. It handles standard IFF, compressed or uncompressed, RAW format, old digiview files ,ARATI (sign of Evil) Neochrome images or even just working on palettes from IFF files. The main features include conversion to/from HAM, to HALF-BRITE and easy chopping of planes, complex palette operations, including histograms of population counts of pixels of a particular colour, where the bars can be hand modified and the image recalculated. It can perform simple resizing of pictures (2 or 3 times thinner, shorter, wider or taller and you choose between average, odd, even, or colour calculation), planes can even be rotated.

On to the juicy bits. You can adjust just about any register of the screen as a whole. There is a colour bias control which lets you change the overall red, green, blue, saturation, hue, or intensity. The image processor window allows you to anti-alias in two different modes, where you set the sensitivity and even the percentage of the picture it affects. It also has line-emphasisers (I guess you can call it that) which once again you control. Contrast enhancers and the like also. It can also extract certain colour information ie. just the red, green, blue for memory efficient single colour processing, cyan, magenta, yellow for colour printing and black and white. PIXmate also offers auto or manual merging of these files from disk.

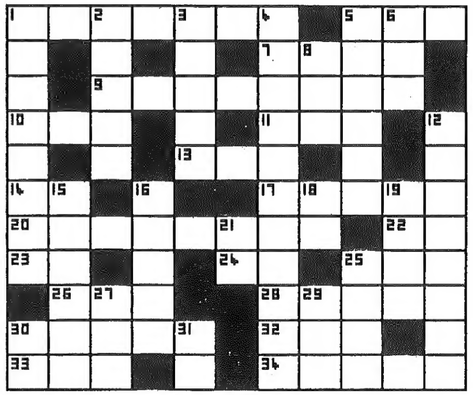
The best feature (to me) however is also what PIXmate is most capable at: the formatting of pictures. You can take any HAM image, and unlike Butcher, perform all the functions available on that picture (in Butcher, when you have a HAM image, all the menu items apart from some very simple operations are ghosted!). What's even better is that you can convert a HAM image into HALF-BRITE (but this is a problem for PIXmate as I will explain later) or any number from 1 to 32 colours. Yes, if you have drawn an image with all 32 colours and find you need more in just a normal 32 colour drawing program (eg. DPAINT II) then you can average the colours to say 27, leaving you with five more. Since I am describing this function I might as well point out why PIXmate is better than Butcher. When you convert an image into less colours on Butcher, you get a reasonable reproduction. I think however, that Butcher only uses the colours already in the palette. This means that PIXmate, by taking simple population counts and averages, gets the best image possible. I have compared HAM to 32 from both Butcher and PIXmate, and there are two interesting findings: 1. PIXmate produces a much better looking final product and 2. PIXmate is approximately three times faster!

The other brilliant feature of PIXmate I will mention is the file requester. I know that this has little to do with image processing but it has a lot to do with a program review. Programmers please take note of this. The file requester of this program is the fastest, most efficient, practical and easy to use bit of programming on the Amiga I have ever seen. First, the requester window will appear on the Workbench screen and this screen will be flipped to the front (in case it would be invisible due to palette colours of the work screen). Second, the files appear in the requester as it reads them from disk, in the order they appear. Third, you can choose to double click a file at any time during the listing and it will load/save/delete this file. Fourth, there are three different very fast sorts available on the file names that you can perform at any time while it is reading. Fifth, there are "buttons" for every device that resembles a disk (including RAM disks) and if it can't fit them all into the requester, there is a button for rotating between the devices. Sixth (I told you it was good), if you exit the requester by loading a file or cancelling, it will remember up to that point for the next time you access it and read from that point onwards in the directory. Seventh, it has easy double-click moving to other directories, including parent, root and even last directory accessed. Finally, eighth, it supports wild cards (*.* style) and can load them in order by using the "Next" facility eg Pic* would load Pic1, Pic2, Pic3... It is interesting that a graphics program of all things would be the first to be so thorough in it's file-handling. The point I would like to make in listing all these is that this is the sort of thing missing from Amiga programs to put them into first class. Somebody has already mentioned in a previous article this month that compared to compatibles of I won't say the name, we really do have second rate programs. If we wish to see the Amiga as the standard (and we all know it is more than capable) then programmers should put a little more effort if they want their programs to stand out and the manual accompanying the program should be more professional. I forgot to mention that the manual is also of a very high standard - something that isn't as imporant to me as I prefer playing with each facility after I know what it basically does so that I can get the true feel of it.

Problems; and believe me it is not without them. The most immediate problem to me was the old American belief the the world ends at their shores as Lester pointed out last month. What I mean is that the program is designed for NTSC (Never The Same Colour) usage and does not support PAL (Perfectly All Lovely). You cannot set 640x512 on the display window but interestingly, the picture is always in super-overscan, so when you have a 320x400 or 640x400 on screen with the interlace off, it will fill the bottom of a PAL screen. I discovered something (pretty quickly I might add) of great relief. If you load a picture that is any size (say 704x564 for PAL overscan), the program will be tricked into using these settings for the display window. This means that if you have a blank PAL overscan screen saved on disk, you can load this in each time you want these settings. The other problem is a real let-down. When you have a picture in HALF-BRITE or convert it to that mode, you cannot do anything to it. Sure the picture format window says that it is in that format, but anything you do to it just goes amuck. Come on guys, how can you leave out a complete format? The other problem is memory. PIXmate really needs at least one meg for it to be useful. What's worse is that it is a chip-memory hog. Most of it's processing involves storing individual screens and then merging them. This means that they store the pictures in chip memory - even nine meg couldn't help you there. This is one thing they just have to fix - the pictures don't need to be in chip memory if they are not being displayed.

The one other thing that I wanted that it doesn't have is more flexible resizing for converting NTSC images to PAL. I have accomplished a crude conversion using PIXmate by making the picture 4x larger and then three times smaller (in two parts, top and bottom and then merging the two) and this has been pretty successful but not accurate (I get 320x266, not bad). Since I have just seen Deluxe Photolab in brief, I have found a program to do this. All you do is set the picture resize to any size you want (literally) and press the resize button. I thought this would be the answer and I would go through all my pictures and do this to them, but alas, this process takes in the order of five minutes! (PIXmate is miles faster for the processes it was designed for than this program) For some of my best images I have done this though, as the NTSC pictures are really out of proportion for the screen, as they should be full screen. Back to PIXmate, however, I cant wait to see an update! Thanks for listening, and I will be back next month with a full review (finally) of Excellence! which is what this month's newsletter was done with.

Here is a refreshing change to our Workbench, a crossword puzzle courtesy of Alan Garner. Clues are semi-cryptic and answers will be printed in next month's issue along with a new crossword.



ACROSS

1 (&1D) The Amiga AUTOEXEC.BAT ?
5 Space ___ (Found on a keyboard)
7 Rice is confused in the advanced C Sig.
9 Hit Peter around for some basalt
10 To employ Sue ?
11 Don't get into a blue with them
13 On American coupons and jeans
14 North Carolina (abbr.)
17 River horse
20 Clip Rome for a language program
22 Possible bit status
23 Extended Play (abbr.)
24 Logical Operation
25 Operating system for controlling file storage and disk access
26 My friend has an extra 56 lines
28 Usually flashes red
30 Measuring device (ho-hum)
32 Half a greek letter is escaping
33 Alternate command set
34 Search

Down

1 See 1A
2 Sounds like an indian compiler
3 A real gem of a font
4 Attached devices
5 Ate the chart for this area of memory
6 What the Amiga is
8 Bone
12 A game about black holes ?
15 A policeman assisting the 68000 ?
16 To buy one would be an original sin
18 Infra-Red (abbr.)
19 What Amiga enthusiasts become
21 See! It sounds depressed
25 Unusual mode we all like to watch
27 Adenosine Triphosphate (abbr.)
29 Resin
30 Mother
31 Mr. Mical

TEX, a Sophisticated Publishing System

TEX is a typesetting system invented by Professor D. E. Knuth at Stanford University in the late 1970s. Its original objective was to make it easier to do mathematical typesetting for technical text books which is the most sophisticated and challenging area of typesetting.

TEX82 is the implementation available now. AmigaTEX is an implementation produced by Tom Rokicki, other available implementations are PCTEX for IBM PCs and TeXtures for the Macintosh. AmigaTEX includes all the facilities described below.

Typeset Quality

TEX provides unparalleled output quality. Desktop Publishing programs improve on typewritten text and sometimes offer the ability to insert graphics prepared by other software. TEX automatically does a lot of detailed work usually known as typesetting. This includes adjusting interword spacing, hyphenating words if necessary and generally making paragraphs look as attractive as possible, taking into account type size and line spacing.

This also includes the ability to control the page area used for printing, and switching into multicolumn modes where the text flows from one column to the next or the text in each column may be entirely independent. These capabilities can be used to produce a great variety of tabular layouts.

Word Processing

TEX includes programming language which has been used to provide a range of extra commands suited to specific applications. LATEX is a sophisticated set of commands which are like a simple word processor to use. This means that you can use TEX without even knowing the more detailed typesetting commands of TEX for the detailed typesetting tasks.

Mathematics, Alignment Power

TEX's greatest strength is mathematics; nothing else can compete. Complex mathematical equations are very easy to specify and are laid out with quality simply not available anywhere else. If you need to publish mathematical or scientific documents, TEX is essential.

Document Structure

TEX's commands can be used for Tables of Contents, automatic cross references, glossaries, indexes and predefined document styles. It provides various page numbering styles.

Simple Input Files

TEX accepts input from simple ASCII files which can be prepared by almost any text editor or word processor. Formatting commands are interspersed through the text and are processed by TEX to produce a device independent file.

Computer Independence

TEX is available on hardware ranging from cheap (but by no means nasty) Amiga's and Atari's, to Macintosh's and IBM PC's, minis such as Unix, VAX/VMS, up to IBM and CDC mainframes. A TEX file transferred from any computer to another will produce identical output including all line breaks, page breaks and hyphenation.

Output Device Independence

TEX produces identical output on a variety of printing devices, within the resolution limits of each printer. A page will be typographically identical on a dot matrix printer, e.g., an Epson MX-80, a 300 DPI laser printer or a high resolution phototypesetter. Thus cheap, fast printers can be used for successive drafts and proofs while only the final print need be done on a high quality machine.

Screen Previewing

Screen previewers are used to proof-read the exact image as it would be printed (sometimes called WYSIWYG). Provided the screen or terminal being used has adequate graphics capability, the image to be printed, fonts, sizes and format can be previewed. This allows successive drafts to be corrected without wasting time to actually print copies.

Interactive Environment

Some computers have facilities which offer a highly interactive environment for using TEX. AmigaTEX (with enough memory) can have a text editor in one window for entering TEX commands and text, and concurrently the previewer in another window on screen to show the last completed page of the entered text (TEX cannot yet invent your text!).

Availability

AmigaTEX is available from **TEXworks Pty. Ltd.**, 157 Danks Street, Albert Park, 3206.
Tel: 03 699 4083. See advertisement this issue.

[Ed's note-the previous page, the "plug" for Tex is really an advertisement but has not been charged so for two reasons. 1. The people who sent us their advertisement (seen below) have had trouble getting it printed with us so in good faith I have passed this as an article. 2. There were no articles to fill in this area anyway.]

Amiga DOS - Enhancer Software. Version 1.3
A Quick Overview by Peter Ward.

On a recent visit to Creative Computers in Lawndale, I managed to grab a copy of the very long awaited official release copy of "Amiga DOS 1.3".

The package ($US29.00) consists of three disks containing, not surprisingly, Kickstart (for A1000 owners), Workbench and a Extras/Printer Driver disk. The new Kickstart ROM Chip for the A500/2000 was an extra $US39.00. This much maligned latter option (by local dealers) with comments like "you'll only need it if you want to autoboot off a hard disk" turns out to be a useful upgrade, even for those of us without a hard disk, but, more on that later. Also included is a Manual, about 200 pages or so, outlining in detail the changes made in Version 1.3.

Now, apart from the ability to autoboot from a hard disk, the new kickstart will enable you to re-boot from a recoverable ramdrive.device. Depending upon how much spare RAM you have, you can even reboot with a "Workbench in RAM" (over 2 megs recommended). The manual gives quite explicit instructions on how to configure your system to do this. For sheer speed on loading "Workbench" this option makes purchase of the new chip well worth it. As for installation, well I'm no wiz when it comes to micro-chip-surgery, but I bit the bullet anyway, and pulled the back of my Amiga, to see if I could work out where this new chip went. Low and behold, there was a chip marked serial number 315093-01. The new chip was 315093-02....out with the old (ever so gently though kiddies) and in with the new, and hey presto! (Some people will charge you money for this intellectual feat).

Workbench 1.3 is full changes. Sixty four to be exact. The major changes are a CLI SHELL, very similar to the existing format but the SHELL allows you to edit lines and backtrack through your previous commands. CMD allows you to re-direct serial or parallel port output to a file on disk. MORE displays ASCII text files and FIXFONTS updates the font directory with some new fonts. ICONX allows you to execute script files from the workbench and EVAL allows simple maths while in the CLI environment. There is a new Clock/pointer, which replaces the standard arrow/pointer with a small digital clock. The printer drivers are much much better...as ten times faster is no exaggeration for graphic dumps. MICROEMACS, a superb file editor, is given considerable attention, with a complete chapter in the Manual devoted to it.

Amiga DOS 1.3 Enhancer software is well documented. The changes are many, and do improve the performance of your machine considerably. I frankly don't know if the package is available locally yet, or what it will retail at, but it comes well recommended.

CCD Camera Review
by Rex Shephard.

If you read the article I wrote two newsletters back regarding the use of NEWTEK's DigiView then this may be of interest to you. [Ed's note-this article never made it into Workbench until this month, so this explains to you, Rex, why you haven't received your disk back yet, but I am still typing this article in for you] I wrote in that article that the experts claimed that the new CCD cameras now on the market are the ultimate for use with the Amiga and your

favourite digitizer. Last Friday the local SONY distributor phoned me to inform me that the long awaited Sony CCD camera had arrived into stock, and he, knowing that I was wanting to road test one of these beasts offered it to me for the weekend. I gladly accepted the chance to try this camera on the Amiga and was running figures through my head in an endeavour to find the $1500.00 needed to purchase one IF it came up to my expectations.

I will tell you here all I learnt about the new camera in the two days I had it. It was a Sony AVC-D5/D5CE single chip CCD monochrome video camera without the power supply or lens at the price of $1150.00 The power supply which was essential to the running of the camera and could not be substituted was another $240.00 and a lens would cost around $115.00 for a standard F1.4 that makes a total price of $1505.00 Boy! that's nearly the cost of a new color/sound video 8 camera with lens from Sony.

The size did not help to make the camera worth the cost as it only measures 50(W)x50(H)x119(D) and weighed a mere .29kg and uses a whole 2.5 watts of power to operate. The power supply was somewhat larger and measured 171(W)x65(H)x129(D) and weight was up to 1.35kg. All the leads needed to get to work were supplied as standard also as they used the BNC connectors so that made life easy to get it up and running. The camera was standard in all other areas as well as it took my C Mount lens and a 2:1 interlace was set ready to roll.

Well having set all the above up and ready to go nothing was stopping me from testing this camera out with the Amiga and then the tense moments waiting for the software to show me the full color digitized image was close. Settings for software were set as standard with a tube type camera and lighting was as attempted with less lighting and the lens F stop was closed two stop marks and a better result energed, we were getting somewhere.

My overall opinion of the camera was as follows: less light is needed and one F stop less on the camera was required than with the tube type (no big gain). Image on the monitor was dead equal before digitizing, slightly less grainy than with the tube camera, color was just about the same, so the overall quality was not much better.

To sum up I would say that for what we use a camera for on the Amiga that the minimal use of the tube style cameras with digitizing we can expect to get very long life from that type of camera and the expense of the CCD type cameras does not warrant the outlay for the little picture quality you can expect to get. Save your money with cameras and spend it on lighting and improve your results by experimenting in that field.

I tested the camera with different pictures and even the direct sunlight we had last weekend and the overall results were all very similar with little noticeable improvements in picture quality. Many thanks to McCullock Agencies for the Sony CCD camera and saving me a huge $1500.00 as I am even more impressed with my Hitachi HV 720 K-S.

Short reply... by Con Kolivas.

I'm not sure about the Charged Couple Device camera's quality but what I do know is that any standard camera can be improved on for use with digitizing. The reason for this (I am led to believe) is that there are not enough scan lines being transmitted from the camera to the digitizer (about 200 of them). What you really need is more scan lines than your screen resolution (about 600 or more). This is not cheap, obviously, but you can get just pure cameras, with no add-ons, just a lens, a video output and a power cord. These cost around 600-700 dollars. If you wish to contact me and get in touch with someone who has one of these, give me a tingle (The Editor - ph. 484-1339).

THE KILLER STARTUP-SEQUENCE

by Keith C. Moore

An Interactive, Ram-based, Turbo-Charged, Startup-Sequence.

WOW!!!

Having been a member of AUG since its inception, it is with a rather guilty conscience that I submit this humble offering to Peter Jetson's pleas for more WorkBench articles. [Ed's note- thanks but my name is Con.]

Ever wanted to have just one WorkBench disk with all your familiar friendly goodies on it, but everytime you needed to run your word-processor program, you'd find that you had to re-boot your entire system? Introducing the Killer Startup-Sequence (K.S-S)

The following Startup-Sequence, assorted batch-files and other extraneous goodies are the nett result of nearly three years of reading, collecting, experimenting and general computer beach-combing through hundreds of Amiga related magazines, articles and text-files from the public domain disks and various bulletin boards in and around Melbourne.

I would like to take this opportunity to urge all persons, either novice or experienced Amiga users, to take a look at what is available in the public domain, both on disk and on our local bulletin boards. There is a whole world of utilities, demos, music, graphics, games and business related software ranging in quality from bad to better than many commercial releases.

Comprehensive listings of all the currently available disk-based public domain software is printed regularly in the monthly magazine 'Amazing Computing'. (Recommended reading).

The following files grew out of my growing frustration with the amount of time it took to boot-up various disks required for my work and day to day activities. Coupled with the fact that my then current WorkBench disk was bursting at the seams with various programs and utilities (and I couldn't afford a hard-disk). I realised that a total re-organisation was required, hence; the KILLER STARTUP-SEQUENCE (K.S-S) was born.

To make full use of the K.S-S you will require the following.

1) As much additional Ram as you can lay your hands on.

2) An additional disk drive.

3) A number of Public Domain programs and utilities which I would strongly urge you to acquire even if you don't use the K.S-S, they make using the Amiga so much easier and friendly, (they should have been part of AmigaDOS in the first place).

ASDG-rrd	- Fred Fish Disk 58
RUNBACK	- Fred Fish Disk 65
CONMAN	- Fred Fish Disk 133
DMOUSE	- Fred Fish Disk 145

4) A piece of relatively inexpensive commercial software (optional), FACCII. (Again this little gem fits into the 'Once you've used it - you won't be able to live without it' category).

5) A better text editor than ed (again optional) either MicroEMACS or TED. TED is smaller and has far fewer options than MicroEMACS, but it sure beats the pants off tired old 'ed'. If you have any Fast-Ram you should run FIXHUNK on TED first.

MICROEMACS	- Fred Fish Disk 119 or
TED	- Fred Fish Disk 20 & 31
FIXHUNK	- Fred Fish 36

5) A COPY of your current Workbench, Renamed 'Zzap'

6) A formatted disk named (for the time being) 'ZzapII'

The Killer Startup-Sequence is an interactive (abeit rather inelegant) batch file that creates a Ram: based Systems disk. i.e. the System looks to the recoverable Ram: disk and not the floppy disk that booted the system, for all its general and housekeeping chores. This makes for a much faster system as all Sys: disk searches are conducted from Ram. It also reduces disk swapping to a minimum.

K.S-S allows you to boot your System using either a turnkey WorkBench disk 'Zzap', or the entire System can be run from a Recoverable Disk! - the System: can then be totally re-assigned to any disk you care to nominate (more on that later).

Because this Ram disk can survive warm-boots it allows us to store various files and programs in it that will not be lost due to system resets or (Gulp!) going to lunch with Guru. It therefore allows us to use it as a boot-disk during subsequent Warm-Boots <Control>-<LAmiga>-<RAmiga>. This makes for an unbelievably fast Startup-Sequence and since all Sys:c commands are Ram-based, the whole system gets a turbo-boost with the 'Please insert Volume ??? ' requestor almost a thing of the past. —Way to Go!!!—

There is however one drawback (no gain without the pain), and that is your initial cold-boot can take a while, this is because most of your

Workbench Disk is copied to the Recoverable Ram Disk (device name vd0:). However there are a number of steps you can take to reduce the time taken for this
cold-start.

1) Delete all printers other than the one you are currently using. These can be found in Sys:devs/Printers.

2) (Unless you specifically need it) delete the 'Narrator.device' (found in the 'devs' directory) and the 'Translator-library' from the 'libs' directory. These two files are used to generate the Amiga's speech facility. The deletion of these files will also give you enough room to copy the required Public Domain files to the 'c' directory. [Ed's note-by using ARP, you don't need to delete files!]

3) Use the 'Quick-Boot' facility.

4) Go make a cup of coffee.

My current configuration, which includes an enormous 'c' directory (365k in 88 files), takes about 4 minutes to boot! but subsequent resets (and here's the gain) take a lightning 37 secs to achieve the exact same result.

The 'Quick-Boot' facility is the interactive part of K.S-S. Essentially what it does is scan df1: for a specific file (BootTEX) if it doesn't find it, it branches to a subset of commands and boots the system using 'Zzap' as the Sys: disk this allows you to either boot up normally, or boot with a ram-based Sys:

So let's do it. First get hold of the Public Domain programs listed (the only absolutely essential one is 'ASDG-rrd') but as stated, the other little gems really give the Amiga an elegant feel.

ASDG-rrd - A Recoverable Ram disk. Will survive warm-boots & Guru-Meditations. by Perry Kivolowitz.

RUNBACK - Starts programs from the CLI, allowing the CLI window to close, while the program is still running. [Ed's note-ARP has the command ARUN for this already]

CONMAN - A CLI utility. Provides line editing and line histories using the arrow keys in the CLI recalls past commands. A must for slow typists. by William Hawes

DMOUSE - totally programmable Screen-blanker, Mouse-accelerator, mouse-blanker, Window-to-front (click the mouse three times). PopCLI - type programmable command key, (in this configuration pressing the <Left-Amiga> & <Esc> keys together brings up a new CLI window on the WorkBench screen. by Matt Dillon

FACCII - This is a commercially released floppy disk accelerator -much better than addbuffers. by ASDG

Copy these programs to the 'c' directory of your COPY of WorkBench (renamed 'Zzap') some of the programs: Dmouse, Conman and ASDG-rrd will require files to be copied to other directories. Installation instructions are included with the programs and are quite straight-forward and easy to follow.

Using a text editor such as 'ed' 'Ted' or 'MicroEMACS' copy text-file listing 1: and save it to your Formatted disk (ZzapII:) under the name 'BootTEX'. ZzapII:BootTEX

Listing 1: BOOTTEX ----------

Various files from the System Disk are now being copied to vd0: Recoverable Ram disk. Once completed, the entire System (Including all subsequent Warm-Boots) will run from the Recoverable Ram Disk (device name vd0:)!!!

end listing: Save as 'BootTEX' on volume ZzapII:

To use the Ram: System disk to it's fullest extent, we need to be able to reassign the entire system to whatever disk we are currently working with. For example 'WordPerfect' looks for files that are only present in the 'libs' directory on the WP: disk. Therefore we need to fool the system into thinking that it was booted from the WordPerfect disk. We do this by reassigning all sys:directories over to WP: This is achieved by 'EXECUTING' ReAssign, which in turn executes ReAssign1 Copy Listings 2: 3: & 4: and save to Zzap:s

Listing 2: REASSIGN ----------

```
IF NOT EXISTS Ram:t
   Makedir Ram:t ENDIF  Copy  Sys:s/ReAssign1  to
Ram:t Copy Sys:c/Assign to Ram:t cd Ram:  Execute
t/ReAssign1 ?
```

End Listing 2: save as 'ReAssign' in the 's' directory of volume Zzap: ----------

---

Listing 3: REASSIGN1

```
.KEY DriveName IF EXISTS <DriveName>
 Ram:t/Assign c: <DriveName>c
 Ram:t/Assign Sys: <DriveName>
 Ram:t/Assign l: <DriveName>l
 Ram:t/Assign s: <DriveName>s
 Ram:t/Assign Fonts: <DriveName>Fonts
 Ram:t/Assign Devs: <DriveName>devs
 Ram:t/Assign Libs: <DriveName>libs
 Ram:t/Assign System: <DriveName>System
 Ram:t/Assign t: <DriveName>t
 cd <DriveName>
 ELSE cd Sys:
ENDIF
delete Ram:t/Assign
delete Ram:t/ReAssign1
```

End Listing 3: Save as 'ReAssign1' in the 's' directory of volume Zzap" ----------

---

Listing 4: RAM-MESSAGE ----------

The Ram Disk has not been affected by the Re-Boot

End Listing 4: Save as 'Ram-Message' in the 's' directory of volume Zzap: ----------

---

The command 'Execute sys:s/ReAssign' will prompt you for a drive name, this can be df0: df1: or vd0: (the recoverable ram: disk).

Copy listings 5: and save it as Zzap:s/Startup-Sequence

Listing 5: STARTUP-SEQUENCE ----------

```
df0:c/Mount vd0: IF EXISTS vd0:s/Ram-Message
   vd0:c/version
   vd0:c/echo ""
  vd0:c/Echo "*e[1;33m     A1000   Workbench  1.2
V33.56  22-MAY-87*N*e[0m"
   vd0:c/Type vd0:s/Ram-Message
   vd0:c/cd vd0:
   c/Execute vd0:s/RamStart ENDIF
;QUICK-BOOT
df0:c/Failat 21
df0:c/copy df1:BootTEX to vd0:
IF NOT EXISTS vd0:BootTEX
 df0:c/copy df0:c/RunBack to vd0:
 df0:c/Conman -c -q -t
 df0:c/Dmouse -a7 -s720 -m15 -c3  -R0000  -A0  -C
NewCLI "Con:1/14/550/55/Zzap"
 df0:c/Runback df0:c/FaccII 512
 df0:c/Relabel vd0: Ram
 df0:c/Stack 10000
 df0:c/LoadWb
 df0:c/endcli > nil: ENDIF
;RAM-COPY
df0:c/version
df0:c/echo ""
df0:c/Makedir vd0:c
df0:c/Makedir vd0:System
df0:c/Makedir vd0:libs
df0:c/Makedir vd0:devs
df0:c/Makedir vd0:l
df0:c/Makedir vd0:s
df0:c/Makedir vd0:t
df0:c/copy df0:c/Copy to vd0:c
vd0:c/copy df0:c/echo to vd0:c
vd0:c/copy df0:c/type to vd0:c
```



```
vd0:c/copy df0:c/RunBack to vd0:c
vd0:c/Echo ""
vd0:c/Echo "*e[1;33m      A1000   Workbench  1.2
V33.56  22-MAY-87*N*e[0m"
vd0:c/Type vd0:BootTEX
vd0:c/Copy df0:s/RamStart to vd0:s
vd0:c/Copy df0:s/Ram-Message to vd0:s
vd0:c/Copy df0:s/ReAssign#? to vd0:s all Quiet
vd0:c/Copy df0:devs vd0:devs all Quiet
vd0:c/Copy df0:l vd0:l all Quiet
vd0:c/Copy df0:libs vd0:libs all Quiet
vd0:c/Copy Sys:c vd0:c all quiet
vd0:c/Copy df0:System vd0:System all Quiet
vd0:c/cd vd0: c/Execute vd0:s/RamStart
```

End Listing 5: Save as 'Startup-Sequence' in the 's' directory of Zzap: ----------

---

Copy Listing 6: and save it as Zzap:s/RamStart

Listing 6: RAMSTART ----------

```
c/Path reset vd0:c
c/cd vd0:
c/Relabel vd0: Ram
c/Assign System: vd0:System
c/Assign devs: vd0:devs
c/Assign libs: vd0:libs
c/Assign Sys: vd0:
c/Assign c: vd0:c
c/Assign l: vd0:l
c/Assign s: vd0:s
c/Assign t: vd0:t
c/ConMan -c -q -t c/DMouse -a7 -t1 -s720  -m15  -
c3 -R0000 -A0 -C NewCLI "Con:1/14/550/55/Zzap"
c/RunBack vd0:c/FaccII 512
c/Stack 10000
c/LoadWb
c/endcli > nil:
```

End Listing 6: Save as 'RamStart' in the 's' directory of volume Zzap: ----------

---

HOW K.S-S DOES IT

MOUNT VD0: - exactly that

IF EXISTS VD0:S/RAM-MESSAGE - K.S-S looks for the text file 'Ram-Message' in the 's' directory of the recoverable ram: disk. This file can only be present if a previous RAM-COPY has taken place. If it finds vd0:s/Ram-Message, it writes a few things on the screen and then EXECUTES the rest of the Boot from the Ram: disk. Just prior to executing RamStart there is a cd vd0: this is done because for some reason branching to another batch-file causes AmigaDOS to create a tempory file in the 't' directory. If Zzap: is write-protected a system requestor will appear and stop the files execution. Redirecting this to the Ram: disk gets around the problem.

If vd0:s/Ram-Message is not found then the program branches to the QUICK-BOOT section.

Quick-Boot looks for the text-file BootTEX in drive df1: If it is not present the program boots using Zzap: as its Sys: disk. If BootTEX is present in df1: then it is copied to vd0: and the RAM-COPY section begins. Various directories are created and most of Zzap: is copied to Ram:. For those of you with memory constraints, this section could be modified so that less directories are created and copied. e.g only 'c' & 's' directories. Once all this disk thrashing has taken place the boot is completed from Ram: via s/RamStart.

That's all there is to it, if you want to boot-up with a Ram-based Systems disk, just make sure that (for your initial boot) ZzapII: is in drive df1: with a text-file called BootTEX on it. (subsequent warm-boots will all happen from the recoverable ram: disk).

If you need a fast cold-boot put any disk other than ZzapII: in df1: No disk at all in df1: will result in a system requester informing you of that fact.

Incidentally my configuration of the above replaces BootTEX with an IFF picture called (what else) BootPIC this is then displayed using the command c/RUNBACK c/SHOW vd0:s/BOOTPIC. I run it on an A1000 with one additional disk drive and 2meg of fast ram.

I hope you find this is of some benefit. I've been using it for about 5 months, and now find it quite indispensable. I would be grateful to hear of any improvements, embellishments, or indeed any better ideas for the above. Who knows maybe we could start a Help-Key, Hints & Tips or Readers Mail page for WorkBench. [Ed's note-not a bad idea!]

Regards .....Keith

==========

WE
ARE
MOVING
TO
VICTORIA COLLEGE,
BURWOOD CAMPUS!

PLEASE
DON'T
TURN
UP
AT
MONASH UNIVERSITY!

See the back cover for details.

Editor's Column
(Written 2-Dec-88)

Why are we seeing so much of this new Editor in the newsletter!? Well it's like this...

I offered my services to AUG just on two month's ago. I didn't take over immediately because the club decided it was not such a good idea to let one person do all the work anyway. So, it is not my fault that Peter edited the last newsletter.

So, they said it couldn't be done.. well I'm sitting here typing the last column up on Excellence! on an Amiga!! This means that we finally have a newsletter for the Amiga users group edited and printed with an Amiga. Look, I am not going to can Peter for not using an Amiga, he was forced into the job anyway and to this day has done an excellent job [applause!].

As to why I am everywhere in this newsletter, for a moment I only had two articles which luckily filled up about 8 pages. When I finally received this elusive modem to download articles in AREA 22, repeat AREA 22 of the BBS, it was midnight last night and editing all these articles to suit the newsletter would not have been feasible considering I am going to get my last chance to print this on the laser in ten minutes. This does not mean that I have heaps of articles. Nay we still need them, but I am happy to introduce a reward system - nothing spectacular, but at least a reward. Any articles submitted on disk will be rewarded at the rate of one free public domain disk copy per column of article published in the newsletter. The reward will be in the form of small tokens that can be given in with disks to the software library.

I believe this change will bring forth articles of an even higher standard, as then I will have to select which articles to publish, and bring back some variety into the newsletter. Articles not submitted on disk are unfortunately not going to be rewarded (unless this needs to be changed) as the tokens will be sent in the mail with the disks. I do apologise to one group of people only, those that have previously submitted without any reward (give them some applause too!)

So who am I? You will find out in next month's newsletter when we start a new column (along with some expectant regulars) called know your committee member, which will include a digitized picture each month of a committee member, his/her position and what you can hassle them about. Being new to this world, I am always ready to accept praise, and I can handle some critisism as this is required. You can leave messages on the BBS in area 22 or give me a call on 484-1339. Finally, the end of the Workbench!!

Public Domain Software Order Form

Mail to: Amiga Users Group, PO Box 48, Boronia, 3155, Victoria

Disk Numbers:									

Don't forget to specify collection name, ie Fish, Amigan, Amicus, etc

Disks supplied by Amiga Users Group @ $8 each	$
Disks supplied by member @ $2 each	$
Club Use Only:	Total $
Member's Name:	Membership #:
Address:	
	Postcode:

Newsletter Back Issue Order Form

Mail to: Amiga Users Group, PO Box 48, Boronia, 3155, Victoria

Issue Numbers:									

Be patient, we may have to reprint some issues to fill your request

Number of issues ordered @ $2 each	$
Club Use Only:	Total $
Member's Name:	Membership #:
Address:	
	Postcode:

Application for Membership of The Amiga Users Group Inc

Membership is **$25** per year. Send your cheque to: **Amiga Users Group Inc, PO Box 48, Boronia, 3155**

Surname: _____ Details on this side are optional

First Name: _____ Year of birth: _____ Which model Amiga: _____

Address: _____ Occupation: _____

_____ Postcode: _____ Interests: _____

Phone Number: _____ STD Code: _____

Where did you hear about AUG: _____

_____ Dealer's Name: _____

_____ Dealer's Address: _____

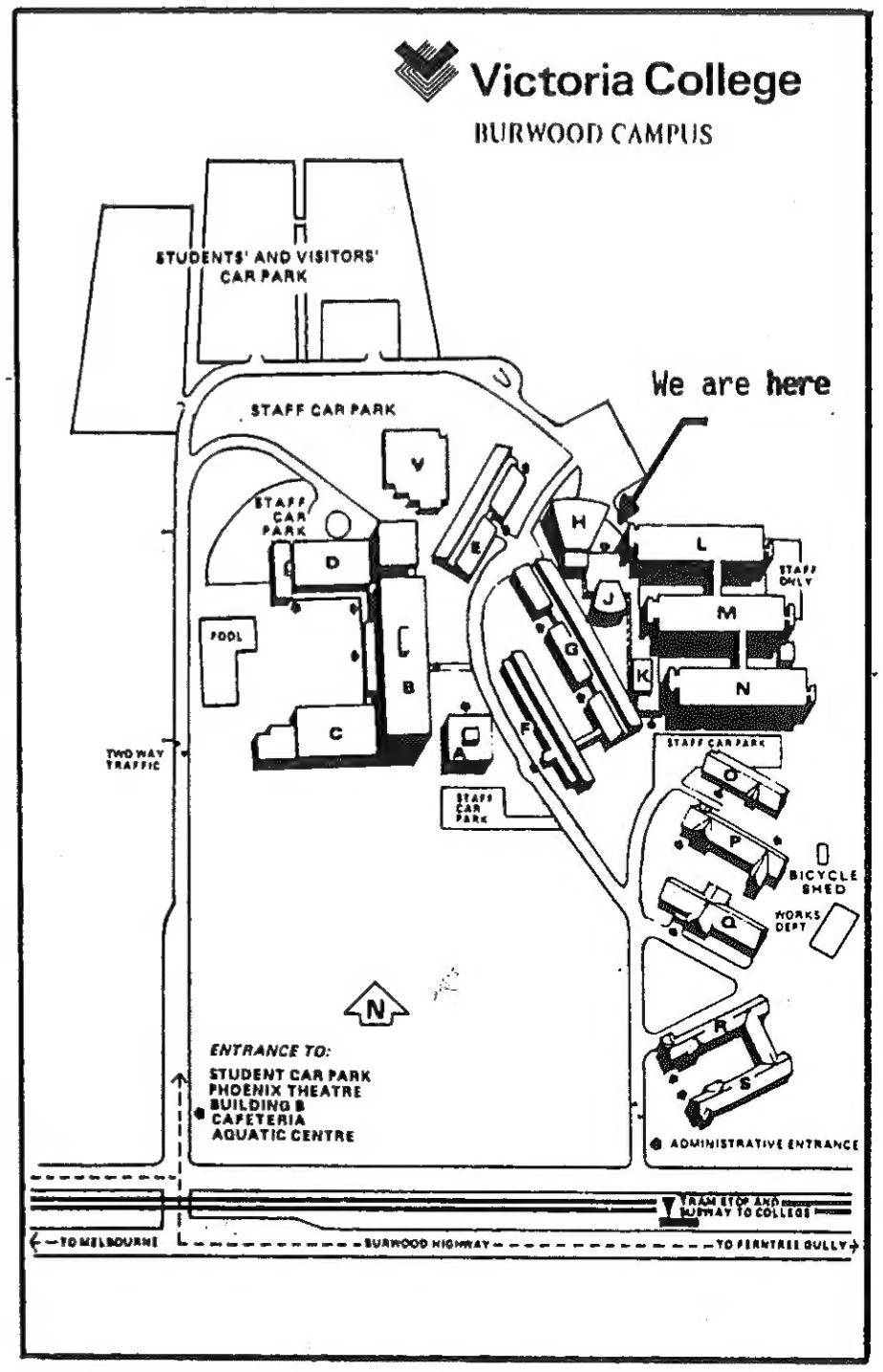
Signed: _____ Date: _____

If admitted as a member, I agree to abide by the rules of the Association for the time being in force.

Club Use Only	Date	Paid	Rcpt #	Memb #	Card Sent

December 1988 Amiga Workbench

AUG meets on the third Sunday of each month



Where is Victoria College Burwood Campus?

Since we have moved to Burwood College since last month, members and visitors may have difficulty locating our meeting place the first time. Victoria College is on the North side of Burwood Highway, Burwood, just East of Elgar road. Coming from the City, turn left at the first set of traffic lights after Elgar road. Follow the road around past the football oval, over three or four traffic bumps to the car parking areas near the netball courts. Further up the road, to the left, you'll find Lecture Theatre 2.

If you have a Melways, try Map 61 reference B5.